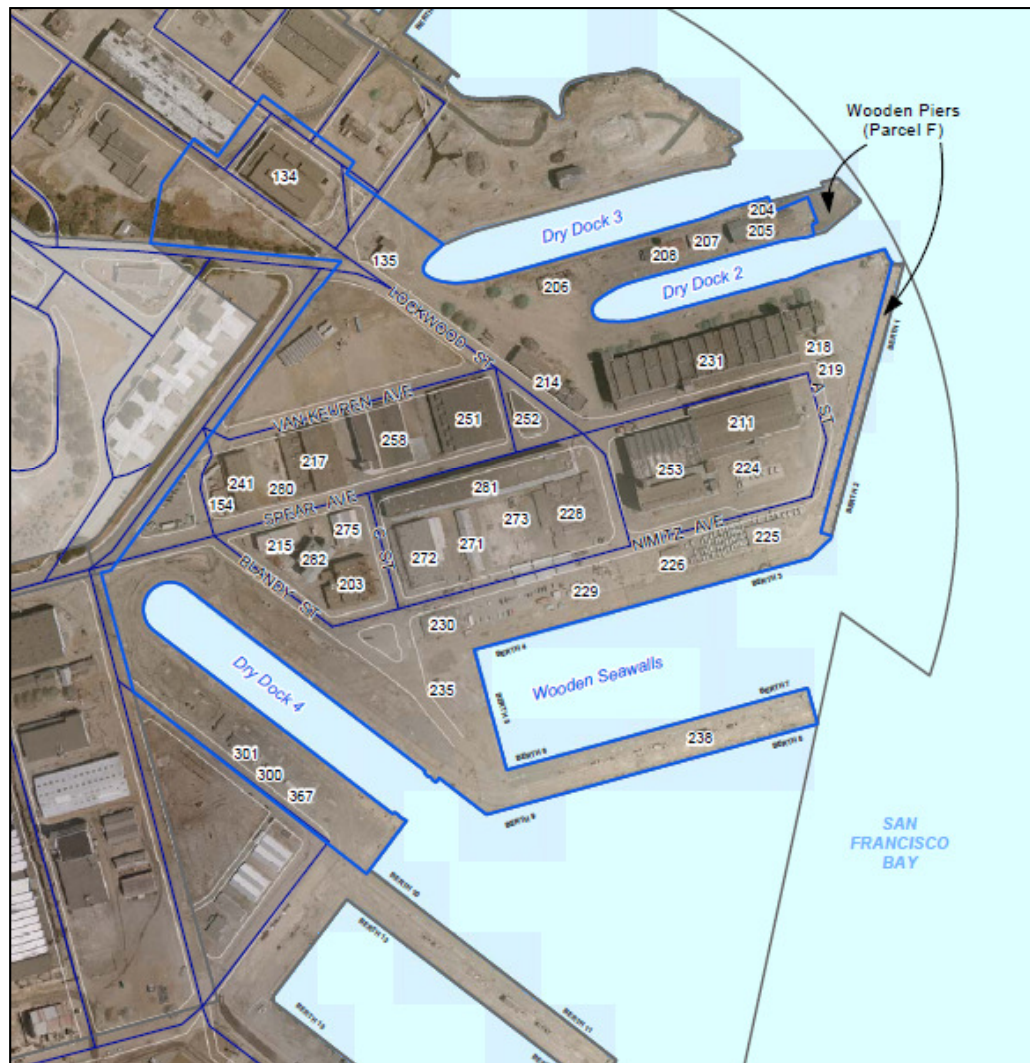



Parcel C Remedial Action

Hunters Point Naval Shipyard
BCT Meeting

February 27, 2014

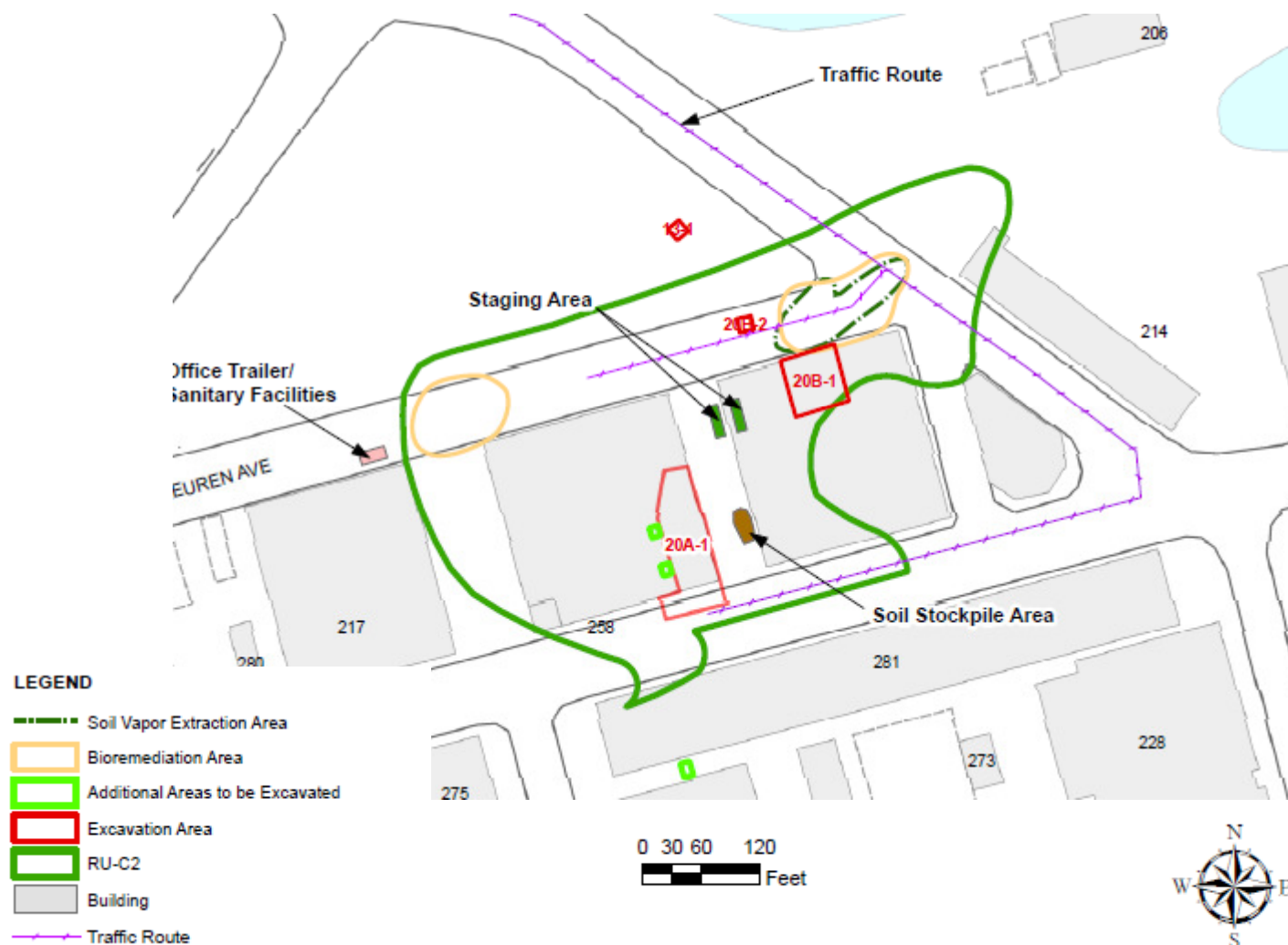
Parcel C Remedial Action



-  Parcel C Boundary
- 231 Building Number

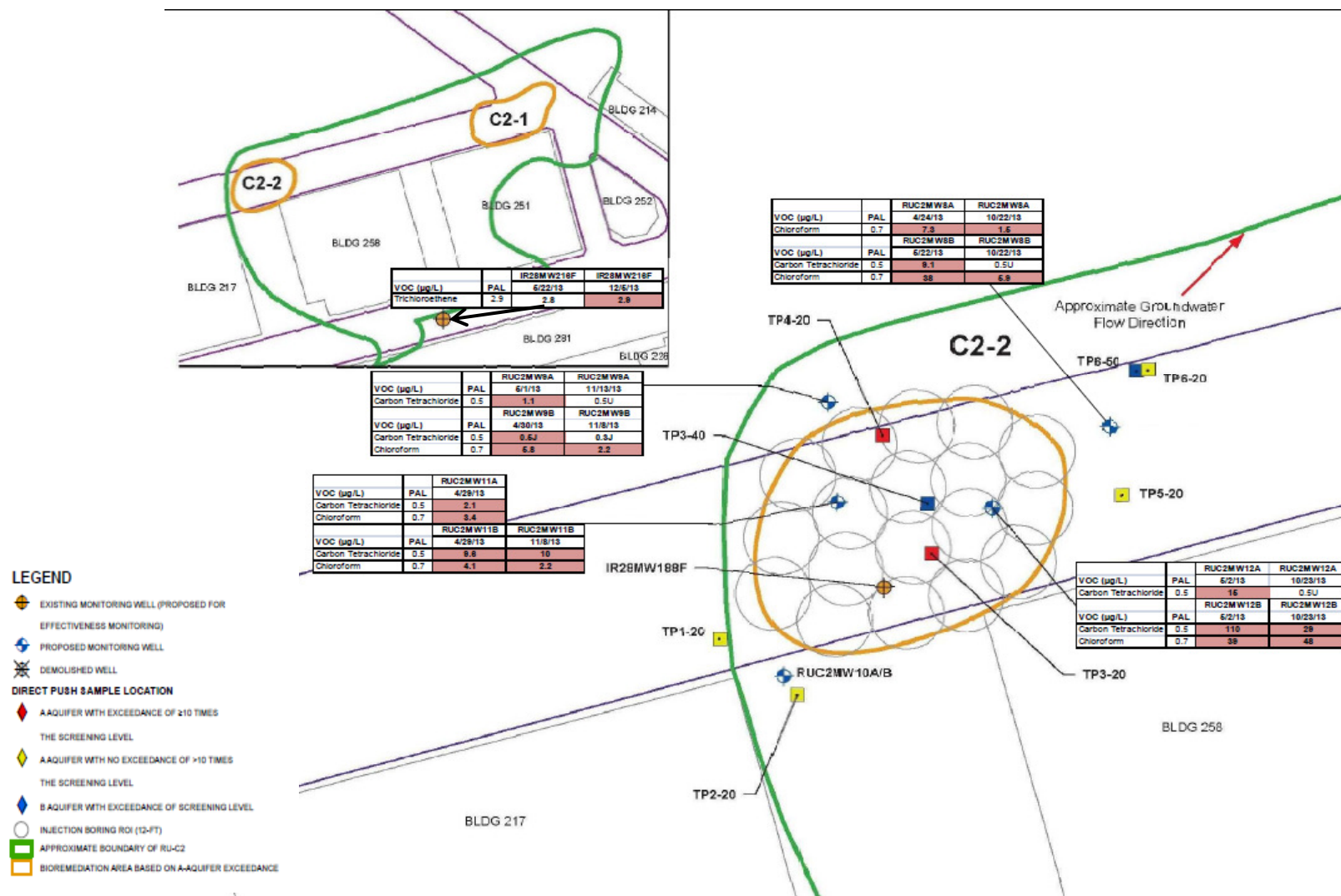


RU-C2 Map



- **Post-injection sampling results at C2-1 and C2-2.**
- **Pre-excavation activities at Building 258 and Building 251.**
 - Completed asbestos abatement activities at Building 258 overhang.
 - Completed canopy demolition (above excavation area) at Building 258.
 - Completed shoring at Building 251.
- **IR28MW190F groundwater monitoring data update (Bldg. 258)**

RU-C2 Three Month Post Injection Results – Building 258 (C2-2)



Building 258 (C2-2) - Analytical Results Summary



- **Concentrations of carbon tetrachloride (RG - 0.5µg/L) were reduced from baseline concentrations at 5 of 7 locations where carbon tetrachloride was detected.**

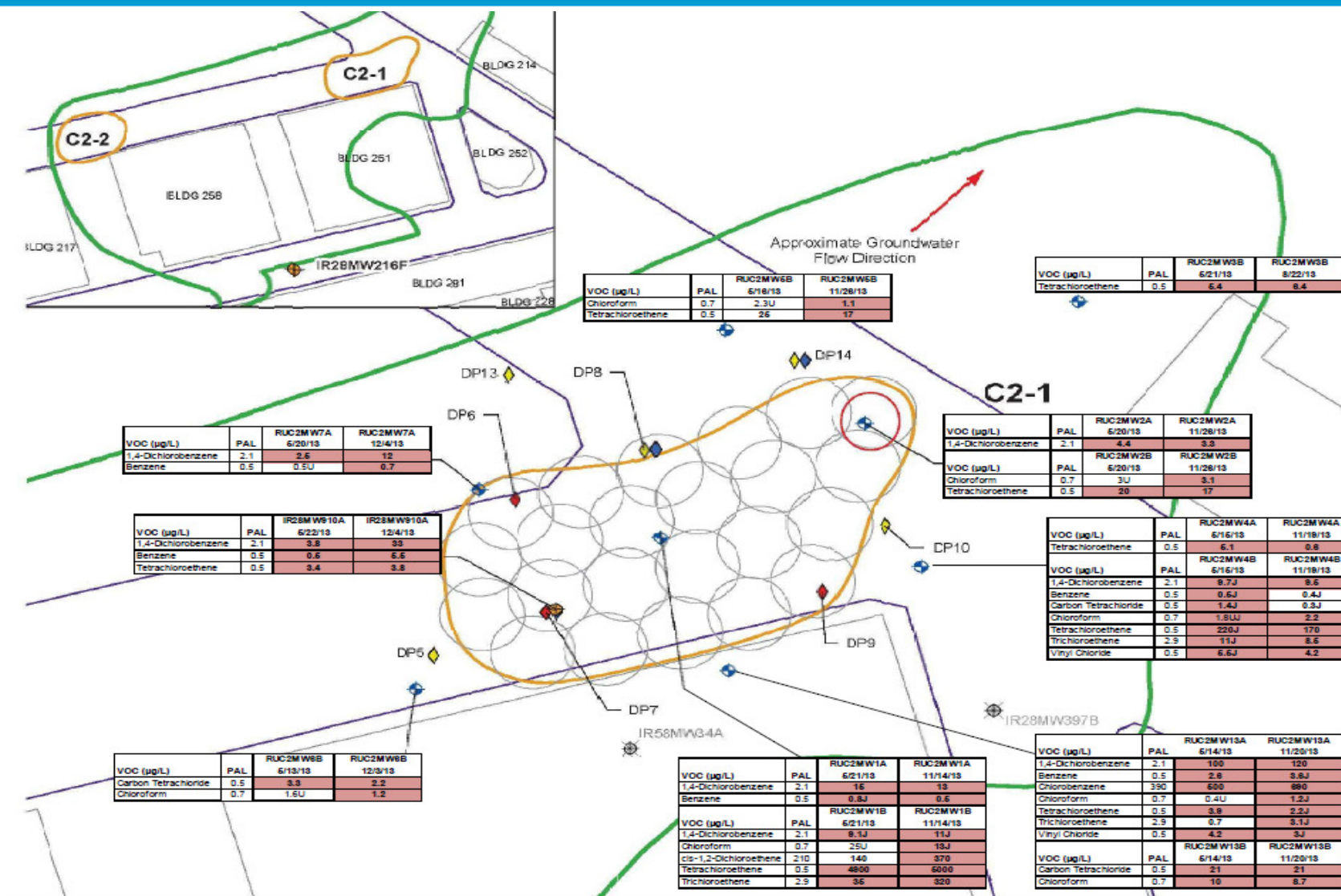
- MW8A – 9.1 µg/L to ND
- MW12A – 15 µg/L to ND
- MW12B - 110 µg/L to 29 µg/L

- MW9A – 1.1 µg/L to ND
- MW9B – 0.5 µg/L to ND

- **Concentrations of chloroform (RG – 0.7µg/L) were reduced from baseline concentrations at 4 of 6 locations where chloroform was detected.**

- MW9A – 5.8 µg/L to 2.2 µg/L.
- MW11B – 4.1 µg/L to 2.2 µg/L
- MW8A – 7.3 µg/L to 1.5 µg/L
- MW8B – 38 µg/L to 5.9

RU-C2 Three Month Post Injection Results - Building 251 (C2-1)



Building 251 (C2-1) - Analytical Results Summary



- **Concentrations of PCE (RG – 0.5 µg/L) were reduced from baseline concentrations at 3 of 7 locations where PCE was detected.**
 - MW2A – 20 µg/L to 17 µg/L
 - MW4A – 6.1 µg/L to 0.6 µg/L
 - MW4B – 220 µg/L to 170 µg/L
- **Concentrations of 1,4-dichlorobenzene (RG – 2.1 µg/L) were reduced from baseline conditions at 3 of 6 locations where 1,4-dichlorobenzene was detected.**
 - MW1A – 15 µg/L to 13 µg/L
 - MW4B – 9.7 µg/L to 9.5 µg/L
 - MW2A – 4.4 µg/L to 3.3 µg/L
- **Concentrations of Benzene (RG – 0.5 µg/L) were reduced from baseline conditions at 2 of 3 locations where benzene was detected.**
 - MW1A – 0.8 µg/L to 0.5 µg/L
 - MW4A – 0.5 µg/L to 0.4 µg/L
- **Concentrations of chloroform (RG - 0.7 µg/L) were reduced from baseline conditions at 1 of 7 locations where chloroform was detected.**
 - MW13B – 10 µg/L to 8.7 µg/L
- **Concentrations of carbon tetrachloride (RG – 0.5 µg/L) were reduced from baseline conditions at 2 of 3 locations where carbon tetrachloride was detected.**
 - MW4A – 1.4 µg/L to 0.3 µg/L
 - MW6B – 3.3 µg/L to 2.2 µg/L
- **Concentrations of vinyl chloride (RG – 0.5 µg/L) were reduced from baseline conditions at 2 of 2 locations where vinyl chloride was detected**
 - MW4A – 5.5 µg/L to 4.2 µg/L
 - MW13A – 4.2 µg/L to 3.0 µg/L

Asbestos Abatement Activities at Building 258 Overhang



- Transite Panels and ACM piping were removed on the overhang at Building 258 (portion above excavation).



Demolition of Building 258 Overhang



- Removal of Overhang at Building 258 (Portion above excavation).
- Concrete above excavation was broken up and removed.
- Steel and concrete will be taken offsite to a local recycler.



Shoring at Building 251



- Rows of sheet piles prior to installation.



- Driving an I-beam to 20 feet bgs around a column in excavation 20B-1.



Shoring at Building 251



- Installed sheet piles on the north side of Excavation 20B-1 at Building 251.



- Driving an I-beam next to a column in Excavation 20B-1.

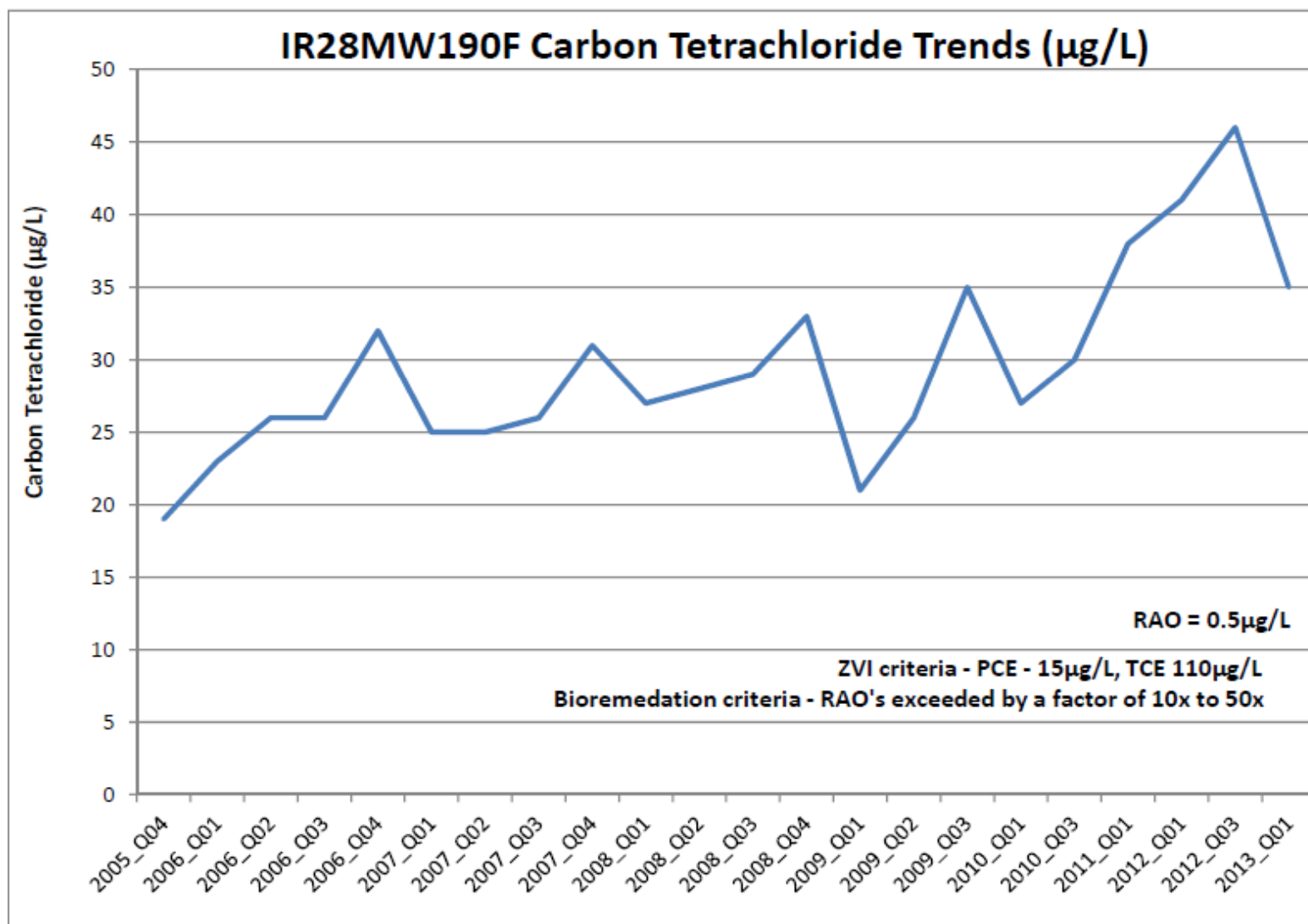
Building 258 – IR28MW190F



- Concentrations of Carbon Tetrachloride have been detected over the PAL of 5µg/L from well IR28MW190F since 2005 . Concentrations have ranged from 19 µg/L to 46 µg/L, averaging 29.5 µg/L.
- Well IR28MW190F is not in an area designated for groundwater treatment in the Final Parcel C ROD or RD.
- Bioremediation criteria in the Final Parcel C ROD states the following – **“Areas targeted for bioremediation have concentrations of select VOCs that exceed remediation goals by factors ranging from 10x to 50x.”**
- Excavation 20A-1 (scheduled for March 2014) is directly adjacent to IR28MW190F.
- Recommend to continue monitoring Carbon Tetrachloride concentrations at IR28MW190F following excavation of 20A-1 to see if concentrations begin trending downward.

Date	Concentration
2005_Q04	19 ug/l
2006_Q01	23 ug/l
2006_Q02	26 ug/l
2006_Q03	26 ug/l
2006_Q04	32 ug/l
2007_Q01	25 ug/l
2007_Q02	25 ug/l
2007_Q03	26 ug/l
2007_Q04	31 ug/l
2008_Q01	27 ug/l
2008_Q02	28 ug/l
2008_Q03	29 ug/l
2008_Q04	33 ug/l
2009_Q01	21 ug/l
2009_Q02	26 ug/l
2009_Q03	35 ug/l
2010_Q01	27 ug/l
2010_Q03	30 ug/l
2011_Q01	38 ug/l
2012_Q01	41 ug/l
2012_Q03	46 ug/l
2013_Q01	35 ug/l

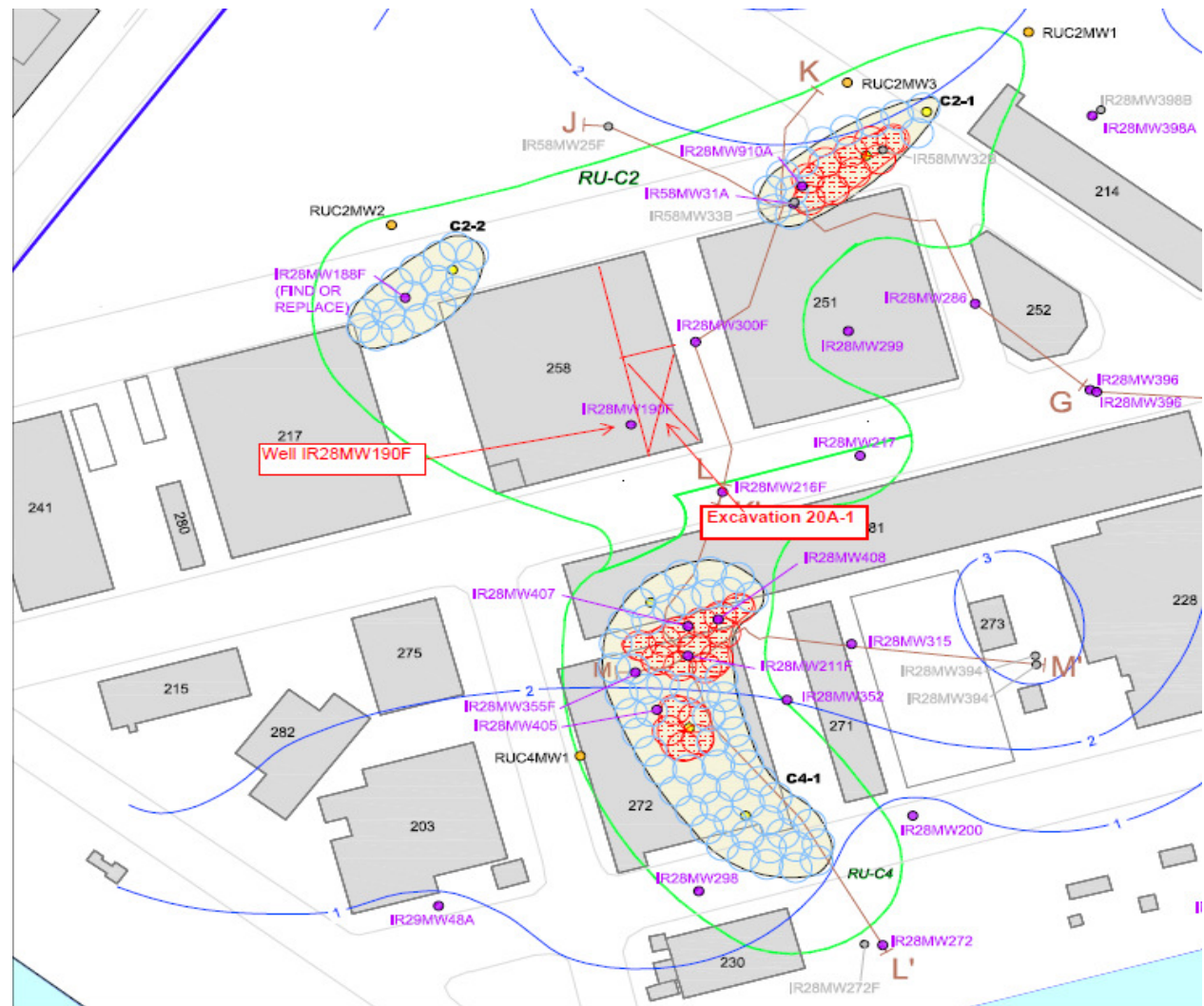
IR28MW190F Carbon Tetrachloride Trends



Building 258 – IR28MW190F



- IR28MW190F is not part of the treatment areas designated in the Final Parcel C ROD or RD.
- IR28MW190F is located approximately 15 feet west of excavation area 20A-1 scheduled for March 2014.



RU-C2 -Schedule



Schedule	
• Excavations/Shoring	Jan 2014 – April 2014
- Shoring at Building 251	Completed Feb 2014
- Demolition of Canopy and Concrete at Building 258	Feb 24 th to March 7th 2014
- Install Shoring at Building 258	March 10th to March 17th 2014
- Excavation at Building 251	March 10th to March 17th 2014
- Excavation at Building 258	March 17th to March 24th, 2014
• Groundwater sampling (1, 3, 6, 9, and 12 months post injection events)	
	8/12/2013 (1-month)
	11/12/2013 (3-month)
	2/24/2014 (6-month)
	8/11/2014 (12-month)
• Installation of SVE system (following excavation 20B-1)	April 2014